



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,876	02/24/2004	Vijay D. Parkhe	008850 USA/CPI/COPPER/PJS	1903
61285	7590	08/03/2006	EXAMINER	
JANAH & ASSOCIATES, P.C. 650 DELANCEY STREET, SUITE 106 SAN FRANCISCO, CA 94547			MOORE, KARLA A	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/786,876	PARKHE ET AL.
	Examiner	Art Unit
	Karla Moore	1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 April 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-57 is/are pending in the application.
 4a) Of the above claim(s) 11 and 21-57 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-8, 10, 12-15 and 17 is/are rejected.
 7) Claim(s) 9, 15, 16 and 18-20 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 24 February 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Election/Restrictions

1. Claims 37-42 and 52-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without traverse** in the reply filed on 13 April 2006.
2. Applicant's election with traverse of species 1 of Group 1 in the reply filed on 13 April is acknowledged. The traversal is on the ground(s) that there are generic claims defined. This is not found persuasive because the mere presence of a generic claims does not entitle Applicant to prosecution on the merits of all the claims at this time.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 2003/0047283 to Parkhe et al.

5. The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Art Unit: 1763

6. Parkhe et al. disclose a substrate support comprising: a support structure (108); and a coating (100; paragraph 23) on the support structure, the coating comprising a carbon-hydrogen network, and the coating having a contact surface comprising a coefficient of friction of less than about 0.3 and a hardness of at least about 8 Gpa, whereby the contact surface of the coating is capable of reducing abrasion and contamination of a substrate that contacts the contact surface.

7. With respect to claim 2, the coating comprises a diamond-like material (paragraph 23).

8. With respect to claim 3, the diamond-like material comprises diamond-like carbon (DLC). See paragraph 23. See paragraph 9.

9. With respect to claim 4, the diamond-like material comprises a diamond-like nanocomposite (DLN) having networks of (i) carbon and hydrogen and (ii) silicon and oxygen. See paragraph 9.

10. With respect to claim 9, the support further comprises a metal-containing adhesion layer between the dielectric and the coating of the mesas. See paragraph 24.

11. With respect to claim 6, the diamond-like material comprises from about 0.1 atom % to about 10 atom % of a metal additive, whereby the metal additive changes the resistivity of the coating.

12. With respect to claim 7, the support structure comprises: a dielectric (Figure 1b, 108; paragraph 19) covering an electrode (Figure 1b, 120); and a plurality of mesas (Figures 2 and 4, formed by channels 204 and 208) on the dielectric, the mesas comprising the coating with the contact surface thereon.

13. With respect to claim 8, the dielectric comprises a ceramic (paragraph 19).

14. With respect to claim 10, the support structure comprises a heat exchanger comprising a least one of a heater and conduits for passing a heat exchange fluid therethrough (paragraph 18).

15. Claims 12-14 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2004/0055709 A1 to Boyd et al.

16. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any

invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

17. Boyd et al. disclose a substrate support comprising: a dielectric (102) covering an electrode (110); and a plurality of mesas (Figures 3 and 4) on the dielectric, the mesas comprising a coating of diamond-like material over a titanium layer (paragraphs 2 and 30).

18. With respect to claim 13, the coating comprises a coefficient of friction of less than about 0.3 and a hardness of at least about 8 Gpa. The material disclosed in paragraph 30 is designed to have these properties.

19. With respect to claim 14, the coating comprises a thickness of from about 1 to about 20 microns (paragraph 27).

20. With respect to claim 17, the diamond-like material comprises diamond-like carbon (DLC). See paragraph 30.

Allowable Subject Matter

21. Claims 9 and 15-16 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

22. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or fairly suggest a dielectric covering an electrode and a plurality of mesas, the mesas comprising a DLC or DLN coating over a metal (titanium) adhesion layer as claimed. Further, no other properly combinable art was found that provided the missing teachings.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP 5935323; USP 5952060; USP 6537429; and USP 6595506 each disclose DLN or DLC coatings.

Art Unit: 1763

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Karla Moore
Primary Examiner
Art Unit 1763
26 June 2006